We Claim:

1. A solid-state laser having an active medium for generating a laser beam, comprising:

a resonator;

a plurality of crystal wafers disposed in said resonator and are optically coupled to one another and form a common beam path for the laser beam;

a pumping light source for generating a pumping light beam whose optical axis is collinear with respect to an optical axis of the laser beam, said pumping light source disposed upstream of said resonator; and

at least one lens functioning as an imaging element for focusing the pumping light beam emerging from one of said crystal wafers onto another one of said crystal wafers disposed downstream, said lens disposed within said resonator.

2. The solid-state laser according to claim 1, wherein said lens has a central opening formed therein.

3. The solid-state laser according to claim 1, wherein said lens has a surface that is curved only in an annular edge region.

4. The solid-state laser according to claim 2, wherein the pumping light beam has an annular cross section and is coupled into said resonator.

5. The solid-state laser according to claim 1,

wherein said crystal wafers have flat sides; and

including a mirror surface disposed on one of said flat sides of said crystal wafers, said mirror surface reflecting the pumping light beam and the laser beam back into said crystal wafers.

6. The solid-state laser according to claim 5, wherein said crystal wafers are disposed in such a way as to produce a folded beam path for the laser beam.

7. The solid-state laser according to claim 1, wherein said crystal wafers which are optically disposed one after another in a propagation direction of the pumping light beam each substantially absorb an equivalent pumping light power.

8. The solid-state laser according to claim 7, wherein, in order to equalize an absorbed pumping light power, said

crystal wafers each have a thickness being different from one another.

9. The solid-state laser according to claim 7, wherein, in order to equalize an absorbed pumping light power, said crystal wafers have a chemical composition being different from one another.

10. The solid-state laser according to claim 1, wherein said resonator has a wavelength-selective resonator mirror for coupling the pumping light beam into said resonator, said wavelength-selective resonator mirror is reflective for the laser beam and transmissive for the pumping light beam.

11. The solid-state laser according to claim 1, including a beam splitter for coupling the pumping light beam into a beam path of the laser beam.

12. The solid-state laser according to claim 10, wherein said resonator has a further wavelength-selective resonator mirror for coupling out the laser beam, said further wavelength-selective resonator mirror transmits at least part of the laser beam and reflects the pumping light beam.

13. The solid-state laser according to claim 1, including a further pumping light source generating a further pumping

light beam coupled into said resonator, and the pumping light beam and the further pumping light beam propagate in mutually opposite directions in said resonator.